

REMARKS

Claims 8-13 and 15 are pending. Claim 8 has been amended. Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 8-13 and 15 were rejected under 35 U.S.C. § 103(a) over Applicants' admitted prior art (AAPA) in view of Ho et al. (U.S. Patent Appl. 2002/0115283, Zhu et al. (U.S. Patent No. 6,402,593) and Chou et al. (U.S. Patent No. 6,706,166). Applicant respectfully traverses this rejection. In addition, the claims 8-13 and 15 were rejected under 35 U.S.C. § 103(a) over Applicants' admitted prior art (AAPA) in view of Ho et al. (U.S. Patent Appl. 2002/0115283, Zhu et al. (U.S. Patent No. 6,402,593) and Zhu et al. (U.S. Patent No. 6,402,592). Applicant respectfully traverses this rejection.

To make out a *prima facie* case of obviousness, the reference or combination of references cited by the examiner must teach or suggest each and every limitation of the subject claim. Because neither combination proffered by the examiner teaches or suggests each and every limitation of claim 8, claim 8 is allowable over the combinations. Likewise claims 9-13 and 15 dependent upon claim 15 are allowable. Such action is respectfully requested.

The Examiner asserts that Ho discloses the claimed method of polishing the copper layer and the copper seed layer by means of a copper electro-polishing process until the copper barrier metal layer is exposed. Applicants respectfully traverse this characterization of Ho, and therefore the rejection of claim 8 in view of the combination containing Ho. At least among the differences between the claimed copper layer and copper seed layer removal process and Ho are the following.

In accordance with a method as set forth in claim 8, when the copper electro-polishing process is performed, a positive power supply is applied to the copper layer and the copper barrier layer and a pad that is commonly used with CMP is not used. Therefore, the copper electro-polishing process can be performed in the same electroplating apparatus that the copper electroplating process is performed. In addition, since the positive power supply is

applied only to the copper layer and the copper barrier layer, the copper electro-polishing process is automatically stopped by a self-stopping phenomenon. However, in Ho, an electro-dissolution polish (EDP) is performed using a pad (110) of an apparatus shown in Fig. 2, as disclosed in paragraph [0039]. Therefore, the EDP cannot be performed in the same apparatus that used to form a conductor layer (220). Besides, the Ho does not teach or even suggest that the EDP is stopped by the self-stopping phenomenon.

Accordingly, the applicant believes that the claim 8 is allowable over the cited references and the other claims depending on claim 8 are also in condition for allowance.

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Respectfully submitted,

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